CLAIMS

I CLAIM:

1. A method of setting up a call in a wireless communication network with separation of call control and bearer control comprising:

receiving a service request for a call, the request originating internal to the wireless communication network or external to the wireless communication network, the call being intended for a select destination;

analyzing the service request and the call origin;

selecting at least one media gateway to switch a user plane for handling the call dependent on the result of said analysis; and

communicating with the media gateway to setup bearer control for the call.

2. The method of claim 1 wherein the call is from a mobile terminal in the network to a mobile terminal in the network and the selecting step comprises selecting a single media gateway for handling the call.

3. The method of claim 1 wherein the call is from external to the network to a mobile terminal in the network and the selecting step comprises selecting a single media gateway for handling the call.

4. The method of claim 1 wherein the call is from external to the network and the select destination is external to the network and the selecting step comprises selecting a first media gateway and a second media gateway for handling the call.

5. The method of claim 1 wherein the media gateway is selected from among a plurality of media gateways dependent on media gateway capabilities required for handling the call. control node

6. The method of claim 1 wherein the media gateway is selected from among a plurality of media gateways dependent on a selected destination for the call.

7. The method of claim 1 wherein the call is from a mobile terminal in the network to external to the network and the selecting step comprises selecting a single media gateway for handling the call.

8. The method of claim 1 wherein the selecting step comprises selecting a group of MGWs according to the select destination of the call and the at least one MGW is selected from the group of MGWs according to capabilities of the at least one MGW.

9. The method of claim 8 wherein the at least one MGW is further selected based on traffic load of the at least one MGW.

10. The method of claim 1 wherein an MPTY call is established by selecting an MGW preferring the MGW serving the active call, and if said MGW serving the active call cannot be used, the MGW serving the held call, and if the MGW serving the held call cannot be used, an MGW with MPTY capabilities selected based on traffic conditions.

11. A method of setting up a call in a wireless communication network with separation of call control and bearer control comprising:

a) initiating call setup over one control node, the one control node determining a media gateway (MGW) for routing a user plane of the call;

b) the one control node requesting resources from the MGW for handling the call;

c) the one control node transferring an address for the MGW in a forward direction to a further control node;

d) the further control node implementing steps b) and c) until either a call destination or an external network is reached, the call being carried through the network, whereby call control is implemented in the control nodes and bearer control is implemented in the MGW.

12. The method of claim 11 wherein the one control node selects the MGW for handling the bearer control of the call.

13. The method of claim 11 wherein the further control node is a gateway MSC.

14. The method of claim 11 wherein the further control nodes are a gateway MSC and a second MSC.

15. The method of claim 11 wherein the one control node is a Transit Switching Center .

16. The method of claim 11 wherein the MGW reserves a logical point identifying reserved resources in the MGW for handling the call in response to a request for resources.

17. The method of claim 16 wherein the step c), the one control node transferring an address for the MGW in a forward direction to a further control node, further comprises transferring an identification of the logical point in the forward direction to the further control node.

18. A wireless communication network comprising:

plural control nodes, the control nodes receiving information about a call, the control nodes requesting resources from at least one media gateway (MGW) for handling a user plane of the call; and

the at least one MGW including plural logical points for connecting plural MGW resources for handling the user plane of the call, the at least one MGW being adapted to identify one of the logical points to one of the control nodes in response to a request for resources from the one of the control nodes,

whereby the plural control nodes use the at least one MGW for handling the user plane of the call.

19. The wireless communication network of claim 18 wherein at least one of the plural MGW resources is one of a transcoder, a conference call device, a modem, a tone generator, a framing device or an announcement device.

20. The wireless communication network of claim 18 wherein the communication between control nodes and the at least one MGW regarding the control and reservation of resources in said at least one MGW is performed using a Device Control Protocol.

21. The wireless communication network of claim 20 wherein the Device Control Protocol is H.GCP.

22. The wireless communication network of claim 18 wherein the control nodes request resources from one of the MGWs in response to the information being a service request for the call.

23. The wireless communication network of claim 22 wherein each MGW includes plural logical points for connecting plural MGW resources for handling the call, the MGW being adapted to identify one of the logical points to one of the control nodes in response to a request for resources from the one of the control nodes.

24. The wireless communication network of claim 23 wherein the identified logical point identifies a reserved resource and is returned to the control server using H.GCP.

25. The wireless communication network of claim 18 wherein the network uses an N-ISUP interface between the control nodes for call control signaling.

26. The wireless communication network of claim 18 wherein the user plane is transferred compressed within and between MGWs.

27. A wireless communication network comprising:

at least one media gateway (MGW), each MGW being adapted for routing a user plane of a call and each including MGW resources for handling the call; and

at least one control node, the at least one control node implementing application logic for call control, the application logic requesting MGW resources from the at least one MGW for handling a call to allow pooling of MGW resources under control of the application logic.

28. The wireless communication network of claim 27 further comprising an interface for signaling for MGW control between the at least one MGW and the at least one control node.